

**REMARKS**

Favorable reconsideration of this application as presently amended is respectfully requested. Claims 2-4, 7-11 and 45-61 are pending. Pending claim 2 has been amended. Withdrawn claims 16 and 32 have been canceled, and withdrawn claims 15, 17, 18, 31, 33 and 34 have been amended. In this Amendment, claims 54-61 are added. No new matter is added. Please note that all references below to paragraphs of the specification of the present application are to the paragraphs in U.S. Published Application No. 2004-0031314.

Support for new claim 54 is found in the specification at paragraphs [0011], [0036], and [0038] originally filed claim 15, as well as elsewhere in the originally filed specification, drawings and claims. Support for new claims 55 and 56 is found in the specification at paragraphs [0055], [0058] and [0092], as well as elsewhere in the originally filed specification, drawings and claims. Support for new claims 57 and 58 is found in the specification at paragraphs [0053], [0054], [0055], [0058] and [0092] as well as elsewhere in the originally filed specification, drawings and claims. Support for new claims 59-61 is found in originally filed claimed 1, in the specification at paragraph [0010], [0011], [0012], [0068] and [0074], as elsewhere in the originally filed specification, drawings and claims.

The Examiner is thanked for indicating that claims 45 and 46 would be allowable if rewritten in independent form.

**A. Rejection of claims 2-4, 7-11, and 47-53 as being unpatentable under 35 U.S.C. § 103(a) over FR '622 in view of Prentice.**

At page 2 of the Office Action, claims 2-4, 7-11 and 47-53 are rejected under 35 U.S.C. § 103(a) as being as being unpatentable over French Patent No. 2,645,622 (FR '622) in view of U.S. Patent No. 1,643,95 to Prentice (Prentice). This rejection is respectfully traversed.

**1. Prentice cannot be properly combined with FR '622 to reject claims 2-4, 7-11 and 47-53.**

a. **FR '622 does not teach nor suggest non-sulfur odorous compounds.**

The Examiner makes the following conclusory assertion at paragraph 3 of page 2 of the Office Action:

It would be obvious from Prentice to employ a selenium compound as the odorous compound in the composition of FR '622, since FR '622 suggests in the Abstract that any odorous gaseous product may be added . . . .

*However, the Examiner has failed to identify a single non-sulfur odorous compound taught or suggested by FR '622, either in the Abstract or anywhere else FR '622.* Therefore, the Examiner's assertion, quoted above, is unsupported by any evidence. Furthermore, the fact the rejection of claims 2-4, 7-11 and 47-53 is based on this unsupported assertion make the rejection of claim 2-4, 7-11 and 47-53 *prima facie* improper.

b. **The Examiner has admitted that the selenium compounds are patentably distinct over the sulfur compounds described in FR '622.**

Furthermore, as admitted by the Examiner at page 4 of his July 24, 2004 Restriction Requirement (Restriction Requirement), selenium compounds are a "patentably distinct" species from sulfur compounds. Because the Examiner, a person of at least ordinary skill in the art, has admitted that selenium compounds are *patentably distinct* from sulfur compounds, a reference, such as FR '622, that only describes sulfur compounds, cannot possibly motivate a person of ordinary skill in the art to look for a reference that describes any other type of compounds, much less selenium compounds. The Examiner's backtracking with respect to the Examiner's previous admission that selenium compounds are patentably distinct from sulfur compounds is also at least implicitly contrary to § 803 of the Manual of Patent Examining Procedure (MPEP) which states the following.

Under the statute an application may properly be required to be restricted to one of two or more claimed inventions only if they are able to support separate

patents and they are either independent (MPEP § 806.04 - § 806.04(i)) or distinct (MPEP§806.05 - § 806.05(i)).

c. **The Examiner's combination of Prentice with FR '622 is based on an improper hindsight reliance on Applicants' Application.**

i. **FR' 622 provides no reason for combining a reference describing selenium compounds with FR '622.**

Given the facts that: (1) the Examiner has been unable to identify a single non-sulfur compound taught or suggested by FR '622 and (2) the Examiner has admitted that selenium compounds are patentably distinct from sulfur compounds, the Examiner's combining of a reference describing selenium compounds with FR '622 to remedy FR '622's deficiency of neither teaching nor suggesting selenium compounds can only be based on an improper hindsight reliance on Applicants' own disclosure in the present application. As the Federal Circuit has stated in *Cardiac Pacemakers Inc. v. St Jude Medical Inc.* 72 USQP2d 1333, 1336 (Fed. Cir 2004) that "Prior knowledge in the field of the invention must be supported by tangible teachings of reference materials, and the suggestion to combine references must not be derived by hindsight from knowledge of the invention itself. See also *Gambro Lundia AB v. Baxter Healthcare Corp.*, 110 F.3d 1573, 1578-79 [42 USPQ2d 1378] (Fed. Cir. 1997) ("However, the record must provide a teaching, suggestion, or reason to substitute computer-controlled valves for the system of hoses in the prior art. The absence of such a suggestion to combine is dispositive in an obviousness determination.")."

ii. **The Examiner has failed to explain why a person of ordinary skill in the art reading FR '622 would look for Prentice.**

Prentice describes odorous component" is used as part of a "defensive and offensive projector composition" that is designed to "repel, nullify, discourage or prevent an attack on vehicles and places handling or storing valuables" (see Prentice, Title and p. 1, lines 4-8). The Examiner's failure to explain why a person of ordinary skill in the art

looking for an odorant to use in a gaseous composition (FR '622) would look for a patent directed odorous component" is used as part of a "defensive and offensive projector composition" that is designed to "repel, nullify, discourage or prevent an attack on vehicles and places handling or storing valuables" is evidence that the Examiner has relied on improper hindsight reasoning and Applicants' own application in order to combine Prentice with FR '622.

d. The deficiencies of FR '622 in failing to teach or suggest selenium compounds cannot be properly remedied by Prentice or any other reference.

For the reasons discussed above, the deficiencies of FR '622 in failing to teach or suggest selenium compounds cannot be properly remedied by Prentice or any other reference. Therefore, the combination of Prentice with FR '622 is *prima facie* improper, and the rejection of claims 2-4, 7-11, and 47-53 over the combination of Prentice with FR '622 is *prima facie* improper and should be withdrawn

2. The rejection of claims 2-4, 7-11 and 47-53 over the combination of Prentice with FR '622 is *prima facie* improper because the Office Action has provided no proper motivation for combining Prentice with FR '622.

a. The Examiner' alleged motivation for combining Prentice with FR '622 is based on a mischaracterization of FR '622.

The rejection of claims 2-4, 7-11 and 47-53 over the combination of Prentice with FR '622 is *prima facie* improper because the Examiner provides no appropriate basis for combining Prentice with FR '622. As set forth in the Manual of Patent Examining Procedure (MPEP) at § 706.02(j), "To establish a *prima facie* case of obviousness . . . there must be some suggestion or motivation, *either in the references themselves or in the knowledge generally available to one of ordinary skill in the art*, to modify the reference

or to combine reference teachings (emphasis added) . . . The teaching or suggestion to make the claimed combination and the reasonable expectation of success **must both be found in the prior art and not based on Applicants' disclosure** (emphasis added). *In re Vaeck*, 947 F.2d. 488, 20 USPQ2d 1438 (Fed. Cir. 1991)."

The Office Action attempts to justify combining Prentice with FR '622 based on the following conclusory statement which relies not on the references of Prentice or FR '622, but instead on Applicants' own disclosure:

It would be obvious from Prentice to employ a selenium compound as the odorous compound in the composition of FR '622, since FR '622 suggests in the Abstract that any odorous gaseous product may be added . . . (See Office Action, p. 2).

However, the above assertion by the Examiner mischaracterizes what FR '622 actually teaches and/or suggests. Contrary to above assertion by the Examiner, FR '622 does not and cannot suggest that compounds other than sulfur, much less selenium compounds, may be used as odorants with hydrogen. FR '622 only describes the use of mercaptan, thiophane and TBM (tertiary butyl mercaptan) odorants (see FR '622, Abstract), all of which are **sulfur compounds**. The Examiner has also failed to identify a single non-sulfur compound that is taught or suggested by FR '622. Therefore, the Examiner has failed to properly identify a motivation in FR '622 for combining Prentice with FR '622. As stated by the Federal Circuit in *Sibia Neurosciences Inc. v. Cadus Pharmaceutical Corp.*, 55 USPQ2d 1927, 1931 (Fed. Cir. 2000), "[d]etermining whether there is a suggestion or motivation to modify a prior art reference is one aspect of determining the scope and content of the prior art, a fact question subsidiary to the ultimate conclusion of obviousness." (citing *Tec Air, Inc. v. Denso Mfg.*, 52 USPQ2d 1296, 1297-98 (Fed. Cir. 1999) (stating that the factual underpinnings of obviousness include whether a reference provides a motivation to combine its teachings with another)). Furthermore, as noted by the Federal Circuit in *In re Lee*, 61 USPQ2d 1430, 1433 (Fed. Cir. 2002), specific reasons must be shown in the art suggesting a combination of references. (See also *In re Kotzab*, 217 F.3d 1365, 1371, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000) ("[P]articular findings must be made as to the reason the skilled artisan, with no knowledge of the claimed invention, would have selected these components for combination in the manner claimed."); *In re Rouffet*, 149 F.3d 1350, 1359, 47 USPQ2d 1453, 1459 (Fed. Cir. 1998) ("[E]ven when the

level of skill in the art is high, the Board must identify specifically the principle, known to one of ordinary skill, that suggests the claimed combination.”)).

b. The fact the Examiner has admitted that selenium compounds are patentably distinct from sulfur compounds is inconsistent with the Examiner’s arguments for combining Prentice with FR ‘622.

In addition to FR ‘622 failing to suggest the use of non-sulfur compounds, as stated by the Examiner at page 4 of the Restriction Requirement, selenium compounds are a “patentably distinct species” from sulfur compounds. Therefore, since, as the Examiner has previously admitted, selenium compounds are *patentably distinct from sulfur compounds*, it would *not be obvious* for a person of ordinary skill in the art to employ a selenium compound, including the selenides of Prentice, in place of the sulfur compounds of FR ‘622.

c. The Examiner’s basis for combining Prentice with FR ‘622 is based on a mischaracterization of what Prentice discloses.

The Examiner alleges that, “Prentice establishes the equivalence between mercaptans and selenides (see Office Action, p. 2).” However, this allegation by the Examiner mischaracterizes and overstates what Prentice describes. For example, Prentice states that:

The odorous or tracer component may be butyl mercaptan or any isonitrile, thiocyanate, mercaptan or any isonitrile, thiocyanate, mercaptan, sulphide, selenide or nitrogen derivative (see Prentice, p. 2, lines 6-10).

As seen in the above quoted portion of Prentice cited by the Examiner, Prentice never states that selenides are the “equivalent” of mercaptans. Also, selenides and mercaptans are but two of several types of compounds that Prentice states may be used in Prentice’s composition.

d. **The rejection of claims 2-4, 7-11 and 47-53 over the combination of Prentice with FR '622 is based on an improper obvious to try standard.**

Also, the Examiner has not identified any criteria set forth in FR '622, Prentice or any other reference, that would a person of ordinary skill in the art to choose which of the several odorants described in Prentice could be used in the place of the mercaptan odorant of FR '622 in a composition including hydrogen. Therefore, the Office Action appears to argue that it would merely be "obvious to try" to substitute a selenide for the sulfur compounds of FR '622. However, as stated in *In re Deuel*, 34 USPQ2d 1210, 1216 (Fed. Cir. 1995), "'Obvious to try' has long been held not to constitute obviousness. *In re O'Farrell*, 853 F.2d 894, 903, 7 USPQ2d 1673, 1680-81 (Fed. Cir. 1988)." Therefore, claim 2 is patentable over FR '622, because claim 2 has been rejected based on an improper "obvious to try" standard.

3. **The rejection of claims 2-4, 7-11 and 47-53 over the combination of Prentice with FR '622 is *prima facie* improper and should be withdrawn.**

For the reasons discussed above, the rejection of claims 2-4, 7-11 and 47-53 over the combination of Prentice with FR '622 is *prima facie* improper and should be withdrawn. Therefore, claims 2-4, 7-11 and 47-53 are patent.

4. **New claim 54-61 are patentable over the combination of Prentice with FR '622.**

Claims 54-61 are dependent, either directly or indirectly, from claim 2, and, accordingly, includes all of the patentable features of claim 2 as well as other patentable features. Therefore, claims 54-61 are patentable over the combination of Prentice with FR '622 for at least the reasons that claim 2 is patentable over the combination of Prentice with FR '622.

B. **Rejection of claims 2 and 7-11 as being unpatentable under 35 U.S.C. § 103(a)**

**over FR '622 in view of either Borschel or Rasmussen.**

At page 2 of the Office Action, claims 2 and 7-11 are rejected under 35 U.S.C. § 103(a) as being as being unpatentable over FR '622 in view of U.S. Patent No. 5,221,545 to Borschel *et al.* (Borschel) or U.S. Patent No. 4,496,639 to Rasmussen *et al.* (Rasmussen). This rejection is respectfully traversed.

**1. Neither Borschel nor Rasmussen can be properly combined with FR '622 to reject claims 2 and 7-11.**

**a. FR '622 does not teach nor suggest non-sulfur odorous compounds.**

The Examiner makes the following conclusory assertion at paragraph 4 of page 2 of the Office Action:

It would be obvious from either Borschel et al or Rasmussen et al to employ hydrogen selenide as the odorous compound in the composition of FR '622, since FR '622 suggests in the Abstract that any odorous gaseous product may be added . . .

*However, the Examiner has failed to identify a single non-sulfur odorous compound taught or suggested by FR '622, either in the Abstract or anywhere else FR '622.* Therefore, the Examiner's assertion, quoted above, is unsupported by any evidence. Furthermore, the fact the rejection of claims 2 and 7-11 is based on this unsupported assertion make the rejection of claim 2 and 7-11 *prima facie* improper.

**b. The Examiner has admitted that the selenium compounds are patentably distinct over the sulfur compounds described in FR '622.**

Furthermore, as admitted by the Examiner at page 4 of his July 24, 2004 Restriction Requirement (Restriction Requirement), selenium compounds are a "patentably distinct" species from sulfur compounds. Because the Examiner, a person of at least ordinary skill in

the art, has admitted that selenium compounds are *patently distinct* from sulfur compounds, a reference, such as FR '622, that only describes sulfur compounds, FR '622 cannot possibly motivate a person of ordinary skill in the art to look for a reference that describes any other type of compounds, much less selenium compounds. The Examiner's backtracking with respect to the Examiner's previous admission that selenium compounds are patentably distinct from sulfur compounds is also at least implicitly contrary to § 803 of the Manual of Patent Examining Procedure (MPEP) (see quotation from MPEP § 803 above).

- c. **The Examiner's combination of Borschel or Rasmussen with FR '622 is based on an improper hindsight reliance on Applicants' Application.**
- i. **FR' 622 provides no reason for combining a reference describing a selenium compound with FR '622.**

Given the facts that: (1) the Examiner has been unable to identify a single non-sulfur compound taught or suggested by FR '622 and (2) the Examiner has admitted that selenium compounds are patentably distinct from sulfur compounds, the Examiner's combining of a references describing a selenium compound with FR '622 to remedy FR'622's deficiency of neither teaching nor suggesting selenium compounds can only be based on an improper hindsight reliance on Applicants' own disclosure in the present application. As the Federal Circuit has stated in *Cardiac Pacemakers Inc. v. St Jude Medical Inc.* 72 USQP2d 1333, 1336 (Fed. Cir 2004) that "Prior knowledge in the field of the invention must be supported by tangible teachings of reference materials, and the suggestion to combine references must not be derived by hindsight from knowledge of the invention itself. See also *Gambro Lundia AB v. Baxter Healthcare Corp.*, 110 F.3d 1573, 1578-79 [42 USPQ2d 1378] (Fed. Cir. 1997) ("However, the record must provide a teaching, suggestion, or reason to substitute computer-controlled valves for the system of hoses in the prior art. The absence of such a suggestion to combine is dispositive in an obviousness determination.")"

ii. **The Examiner has failed to explain why a person of ordinary skill in the art reading FR '622 would look for Borschel.**

Borschel describes “a method of providing selenium in the form of selenate, in a nutritional product, and to nutritional products which contain selenate” (See Borschel, col. 1, lines 7-10). Therefore, Borschel does not describe the use of a selenium compound with any type of gaseous composition. The facts that (1) FR '622 relates only to gaseous compositions and (2) Borschel only describes non-gaseous compositions provides further evidence that Borschel has been combined with FR '622 based on an improper hindsight reliance on Applicants' own disclosure in the present application. The Examiner's failure to explain why a person of ordinary skill in the art looking for an odorant to use in a gaseous composition (FR '622) would look for a patent (Borschel) directed to “a method of providing selenium in the form of selenate, in a nutritional product, and to nutritional products which contain selenate” is further evidence that the Examiner has relied on improper hindsight reasoning and Applicants' own application in order to combine Borschel with FR '622

iii. **The Examiner has failed to explain why a person of ordinary skill in the art reading FR '622 would look for Rasmussen.**

Rasmussen describes “a treatment of polycrystalline ceramic electrolytes, such as beta-alumina, beta”-alumina and NASICON, with hydrogen selenide, preferably as a gas, to introduce hydrogen selenide into the surface of such electrolytes” (See Rasmussen, col. 1, lines 31-34). The Examiner's failure to explain why a person of ordinary skill in the art looking for an odorant to use in a gaseous composition (FR '622) would look for a patent directed to “a treatment of polycrystalline ceramic electrolyte” is evidence that the Examiner has relied on improper hindsight reasoning and Applicants' own application in order to combine Rasmussen with FR '622.

d. **The deficiencies of FR '622 in failing to teach or suggest**

**selenium compounds cannot be properly remedied by Borschel or Rasmussen or any other reference.**

For the reasons discussed above, the deficiencies of FR '622 in failing to teach or suggest selenium compounds cannot be properly remedied by Borschel or Rasmussen or any other reference. Therefore, the combination of Borschel or Rasmussen with FR '622 is *prima facie* improper, and the rejection of claims 2-4, 7-11, and 47-53 over the combination of Borschel or Rasmussen with FR '622 is *prima facie* improper and should be withdrawn

**2. The rejection of claims 2 and 7-11 over the combination of Borschel or Rasmussen with FR '622 is *prima facie* improper because the Office Action has provided no proper motivation for combining Borschel or Rasmussen with FR '622.**

**a. The Examiner' alleged motivation for combining Borschel or Rasmussen with FR '622 is based on a mischaracterization of FR '622.**

The rejection of claims 2 and 7-11 over the combination of Borschel or Rasmussen with FR '622 is *prima facie* improper because the Examiner provides no appropriate basis for combining Borschel or Rasmussen with FR '622. See quotation from (MPEP) § 706.02(j) in Section A(2)(a) above.

The Office Action attempts to justify combining Borschel or Rasmussen with FR '622 based on the following conclusory statement which relies not on the references of Borschel, Rasmussen or FR '622, but instead on Applicants' own disclosure:

It would be obvious from either Borschel et al or Rasmussen et al to employ a hydrogen selenide as the odorous compound in the composition of FR '622, since FR '622 suggests in the Abstract that any odorous gaseous product may be added . . . (See Office Action, p. 2).

However, the above assertion by the Examiner mischaracterizes what FR '622 actually teaches and/or suggests. Contrary to above assertion by the Examiner, FR '622 does not and cannot suggest that compounds other than sulfur, much less selenium compounds, may

be used as odorants with hydrogen. FR '622 only describes the use of mercaptan, thiophane and TBM (tertiary butyl mercaptan) odorants (see FR '622, Abstract), all of which are *sulfur compounds*. The Examiner has also failed to identify a single non-sulfur compound that is taught or suggested by FR '622. Therefore, the Examiner has failed to properly identify a motivation in FR '622 for combining either Borschel or Rasmussen with FR '622. As stated by the Federal Circuit in *Sibia Neurosciences Inc. v. Cadus Pharmaceutical Corp.*, 55 USPQ2d 1927, 1931 (Fed. Cir. 2000), “[d]etermining whether there is a suggestion or motivation to modify a prior art reference is one aspect of determining the scope and content of the prior art, a fact question subsidiary to the ultimate conclusion of obviousness.” (citing *Tec Air, Inc. v. Denso Mfg.*, 52 USPQ2d 1296, 1297-98 (Fed. Cir. 1999) (stating that the factual underpinnings of obviousness include whether a reference provides a motivation to combine its teachings with another)). Furthermore, as noted by the Federal Circuit in *In re Lee*, 61 USPQ2d 1430, 1433 (Fed. Cir. 2002), specific reasons must be shown in the art suggesting a combination of references. (See also *In re Kotzab*, 217 F.3d 1365, 1371, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000) (“[P]articular findings must be made as to the reason the skilled artisan, with no knowledge of the claimed invention, would have selected these components for combination in the manner claimed.”); *In re Rouffet*, 149 F.3d 1350, 1359, 47 USPQ2d 1453, 1459 (Fed. Cir. 1998) (“[E]ven when the level of skill in the art is high, the Board must identify specifically the principle, known to one of ordinary skill, that suggests the claimed combination.”)).

b. **The fact the Examiner has admitted that selenium compounds are patentably distinct from sulfur compounds is inconsistent with the Examiner's arguments for combining Borschel or Rasmussen with FR '622.**

In addition to FR '622 failing to suggest the use of non-sulfur compounds, as stated by the Examiner at page 4 of the Restriction Requirement, selenium compounds are a “patentably distinct species” from sulfur compounds. Therefore, since, as the Examiner has previously admitted, selenium compounds are *patentably distinct from sulfur compounds*, it would *not be obvious* for a person of ordinary skill in the art to employ a selenium compound, including the hydrogen selenide compound of Borschel or Rasmussen, in place of the sulfur compounds of FR '622.

3. **The rejection of claims 2 and 7-11 over the combination of Borschel or Rasmussen with FR '622 is *prima facie* improper and should be withdrawn.**

For the reasons discussed above, the rejection of claims 2 and 7-11 over the combination of either Borschel or Rasmussen with FR '622 is improper and should be withdrawn.

4. **New claims 54-61 are patentable over the combination of Borschel or Rasmussen with FR '622.**

Claims 54-61 are dependent, either directly or indirectly, from claim 2, and, accordingly, includes all of the patentable features of claim 2 as well as other patentable features. Therefore, claims 54-61 are patentable over the combination of Borschel or Rasmussen with FR '622 for at least the reasons that claim 2 is patentable over the combination of Borschel or Rasmussen with FR '622.

C. **Rejection of claims 2, 3, 7-11, 47-49 and 52 as being unpatentable under 35 U.S.C. § 103(a) over FR '622 in view of Schrauzer.**

At pages 2-3 of the Office Action, claims 2, 3, 7-11, 47-49 and 52 are rejected under 35 U.S.C. § 103(a) as being as being unpatentable over FR '622 in view of U.S. Patent Application Pub. No. US 2002/0197304 to Schrauzer (Schrauzer). This rejection is respectfully traversed.

1. **Schrauzer cannot properly be combined with FR '622 to reject claims 2, 3, 7-11, 47-49 and 52.**

a. **FR '622 does not teach nor suggest non-sulfur odorous compounds.**

The Examiner makes the following conclusory assertion in the paragraph bridging p. 2 and 3 of the Office Action:

It would be obvious from Schrauzer to employ an alkyl selenol as the odorous compound in the composition of FR '622, since FR '622 suggests in the Abstract that any odorous gaseous product may be employed . . . (See Office Action, pp. 2-3).

*However, the Examiner has failed to identify a single non-sulfur odorous compound taught or suggested by FR '622, either in the Abstract or anywhere else FR '622.* Therefore, the Examiner's assertion, quoted above, is unsupported by any evidence. Furthermore, the fact the rejection of claims 2, 3, 7-11, 47-49 and 52 is based on this unsupported assertion make the rejection of claim 2, 3, 7-11, 47-49 and 52 *prima facie* improper.

b. **The Examiner has admitted that the selenium compounds are patentably distinct over the sulfur compounds described in FR '622.**

Furthermore, as admitted by the Examiner at page 4 of his July 24, 2004 Restriction Requirement (Restriction Requirement), selenium compounds are a "patentably distinct" species from sulfur compounds. Because the Examiner, a person of at least ordinary skill in the art, has admitted that selenium compounds are *patentably distinct* from sulfur compounds, a reference, such as FR '622, that only describes sulfur compounds, FR '622 cannot possibly motivate a person of ordinary skill in the art to look for a reference that describes any other type of compounds, much less selenium compounds. The Examiner's backtracking with respect to the Examiner's previous admission that selenium compounds are patentably distinct from sulfur compounds is also at least implicitly contrary to § 803 of the Manual of Patent Examining Procedure (MPEP) (see quotation from MPEP § 803 above).

c. **The Examiner's combination of Schrauzer with FR '622 is based on an improper hindsight reliance on Applicants' Application.**

i. **FR' 622 provides no reason for combining a reference describing a selenium compound with FR '622.**

Given the facts that: (1) the Examiner has been unable to identify a single non-sulfur compound taught or suggested by FR '622 and (2) the Examiner has admitted that selenium compounds are patentably distinct from sulfur compounds, the Examiner's combining of a reference describing a selenium compounds with FR '622 to remedy FR '622's deficiency of neither teaching nor suggesting selenium compounds can only be based on an improper hindsight reliance on Applicants' own disclosure in the present application. As the Federal Circuit has stated in *Cardiac Pacemakers Inc. v. St Jude Medical Inc.* 72 USQP2d 1333, 1336 (Fed. Cir 2004) that "Prior knowledge in the field of the invention must be supported by tangible teachings of reference materials, and the suggestion to combine references must not be derived by hindsight from knowledge of the invention itself. See also *Gambro Lundia AB v. Baxter Healthcare Corp.*, 110 F.3d 1573, 1578-79 [42 USPQ2d 1378] (Fed. Cir. 1997) ("However, the record must provide a teaching, suggestion, or reason to substitute computer-controlled valves for the system of hoses in the prior art. The absence of such a suggestion to combine is dispositive in an obviousness determination.")"

ii. **The Examiner has failed to explain why a person of ordinary skill in the art reading FR '622 would look for Schrauzer.**

Schrauzer describes "formulations of lipid soluble organic selenium compounds for topical application in humans and animals" that "may be used for the prevention or treatment of cancer in organs such as the skin, the breast, the rectum and the large intestine" (See Schrauzer, paragraph [0005]). The Examiner's failure to explain why a person of ordinary skill in the art looking for an odorant to use in a gaseous composition (FR '622) would look for a patent (Schrauzer) directed to "formulations of lipid soluble organic selenium compounds for topical application in humans and animals" that "may be used for the prevention or treatment of cancer in organs such as the skin, the breast, the rectum and the large intestine" is further evidence that the Examiner has relied on improper hindsight reasoning and Applicants' own application in order to combine Schrauzer with

FR '622

- d. The deficiencies of FR '622 in failing to teach or suggest selenium compounds cannot be properly remedied by Schrauzer or any other reference.

For the reasons discussed above, the deficiencies of FR '622 in failing to teach or suggest selenium compounds cannot be properly remedied by Schrauzer or any other reference. Therefore, the combination of Schrauzer with FR '622 is *prima facie* improper, and the rejection of claims 2-4, 7-11, and 47-53 over the combination of Schrauzer with FR '622 is *prima facie* improper and should be withdrawn

2. The rejection of claims 2, 3, 7-11, 47-49 and 52 over the combination of Schrauzer with FR '622 is *prima facie* improper because the Office Action has provided no proper motivation for combining Schrauzer with FR '622.
- a. The Examiner' alleged motivation for combining Schrauzer with FR '622 is based on a mischaracterization of FR '622.

The rejection of claims 2, 3, 7-11, 47-49 and 52 over the combination of Schrauzer with FR '622 is *prima facie* improper because the Examiner provides no appropriate basis for combining Schrauzer with FR '622. See quotation from (MPEP) § 706.02(j) in Section A(2)(a) above.

The Office Action attempts to justify combining Schrauzer with FR '622 based on the following conclusory statement which relies not on the references of Schrauzer or FR '622, but instead on Applicants' own disclosure:

It would be obvious from Schrauzer to employ alkyl selenol as the odorous product in the composition of FR '622, since FR '622 suggests in the Abstract that any odorous gaseous product may be employed . . . (See Office Action, pp. 2-3).

However, the above assertion by the Examiner mischaracterizes what FR '622 actually teaches and/or suggests. Contrary to above assertion by the Examiner, FR '622 does not and cannot suggest that compounds other than sulfur, much less selenium compounds, may be used as odorants with hydrogen. FR '622 only describes the use of mercaptan, thiophane and TBM (tertiary butyl mercaptan) odorants (see FR '622, Abstract), all of which are *sulfur compounds*. The Examiner has also failed to identify a single non-sulfur compound that is taught or suggested by FR '622. Therefore, the Examiner has failed to properly identify a motivation in FR '622 for combining Schrauzer with FR '622. As stated by the Federal Circuit in *Sibia Neurosciences Inc. v. Cadus Pharmaceutical Corp.*, 55 USPQ2d 1927, 1931 (Fed. Cir. 2000), “[d]etermining whether there is a suggestion or motivation to modify a prior art reference is one aspect of determining the scope and content of the prior art, a fact question subsidiary to the ultimate conclusion of obviousness.” (citing *Tec Air, Inc. v. Denso Mfg.*, 52 USPQ2d 1296, 1297-98 (Fed. Cir. 1999) (stating that the factual underpinnings of obviousness include whether a reference provides a motivation to combine its teachings with another)). Furthermore, as noted by the Federal Circuit in *In re Lee*, 61 USPQ2d 1430, 1433 (Fed. Cir. 2002), specific reasons must be shown in the art suggesting a combination of references. (See also *In re Kotzab*, 217 F.3d 1365, 1371, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000) (“[P]articular findings must be made as to the reason the skilled artisan, with no knowledge of the claimed invention, would have selected these components for combination in the manner claimed.”); *In re Rouffet*, 149 F.3d 1350, 1359, 47 USPQ2d 1453, 1459 (Fed. Cir. 1998) (“[E]ven when the level of skill in the art is high, the Board must identify specifically the principle, known to one of ordinary skill, that suggests the claimed combination.”)).

b. **The fact the Examiner has admitted that selenium compounds are patentably distinct from sulfur compounds is inconsistent with the Examiner's arguments for combining Schrauzer with FR '622.**

In addition to FR '622 failing to suggest the use of non-sulfur compounds, as stated by the Examiner at page 4 of the Restriction Requirement, selenium compounds are a “patentably distinct species” from sulfur compounds. Therefore, since, as the Examiner has previously admitted, selenium compounds are *patentably distinct from sulfur*

*compounds*, it would *not be obvious* for a person of ordinary skill in the art to employ a selenium compound, including the alkyl selenols of Schrauzer, in place of the sulfur compounds of FR '622.

**3. The rejection of claims 2, 3, 7-11, 47-49 and 52 over the combination of Schrauzer with FR '622 is *prima facie* improper and should be withdrawn.**

For the reasons discussed above, the rejection of claims 2, 3, 7-11, 47-49 and 52 over the combination of Schrauzer with FR '622 is improper and should be withdrawn.

**4. New claims 54-61 are patentable over the combination of Schrauzer with FR '622.**

Claims 54-61 are dependent, either directly or indirectly, from claim 2, and, accordingly, includes all of the patentable features of claim 2 as well as other patentable features. Therefore, claims 54-61 are patentable over the combination of Schrauzer with FR '622 for at least the reasons that claim 2 is patentable over the combination of Schrauzer with FR '622.

**D. Rejection of claims 2, 4, 7-11, 50, 51 and 53 as being unpatentable under 35 U.S.C. § 103(a) over FR '622 in view of Schrauzer.**

At pages 2-3 of the Office Action, claims 2, 4, 7-11, 50, 51 and 53 are rejected under 35 U.S.C. § 103(a) as being as being unpatentable over FR '622 in view of U.S. Patent No. 4,656,038 to Baugh (Baugh). This rejection is respectfully traversed.

**1. Baugh cannot properly be combined with FR '622 to reject claims 2, 4, 7-11, 50, 51 and 53.**

**a. FR '622 does not teach nor suggest non-sulfur odorous compounds.**

The Examiner makes the following conclusory assertion at paragraph 1 of page 3 of the Office Action:

It would be obvious from Baugh to employ a dimethyl selenide as the odorous compound in the composition of FR '622, since FR '622 suggests in the Abstract that any odorous gaseous product may be employed . . . (See Office Action, p. 3).

*However, the Examiner has failed to identify a single non-sulfur odorous compound taught or suggested by FR '622, either in the Abstract or anywhere else FR '622.* Therefore, the Examiner's assertion, quoted above, is unsupported by any evidence. Furthermore, the fact the rejection of claims 2, 4, 7-11, 50, 51 and 53 is based on this unsupported assertion make the rejection of claim 2, 4, 7-11, 50, 51 and 53 *prima facie* improper.

b. **The Examiner has admitted that the selenium compounds are patentably distinct over the sulfur compounds described in FR '622.**

Furthermore, as admitted by the Examiner at page 4 of his July 24, 2004 Restriction Requirement (Restriction Requirement), selenium compounds are a "patentably distinct" species from sulfur compounds. Because the Examiner, a person of at least ordinary skill in the art, has admitted that selenium compounds are *patentably distinct* from sulfur compounds, a reference, such as FR '622, that only describes sulfur compounds, FR '622 cannot possibly motivate a person of ordinary skill in the art to look for a reference that describes any other type of compounds, much less selenium compounds. The Examiner's backtracking with respect to the Examiner's previous admission that selenium compounds are patentably distinct from sulfur compounds is also at least implicitly contrary to § 803 of the Manual of Patent Examining Procedure (MPEP) (see quotation from MPEP § 803 above).

c. **The Examiner's combination of Baugh with FR '622 is based on an improper hindsight reliance on Applicants' Application.**

i. **FR' 622 provides no reason for combining a reference describing a selenium compound with FR '622.**

Given the facts that: (1) the Examiner has been unable to identify a single non-sulfur compound taught or suggested by FR '622 and (2) the Examiner has admitted that selenium compounds are patentably distinct from sulfur compounds, the Examiner's combining of a reference describing a selenium compounds with FR '622 to remedy FR '622's deficiency of neither teaching nor suggesting selenium compounds can only be based on an improper hindsight reliance on Applicants' own disclosure in the present application. As the Federal Circuit has stated in *Cardiac Pacemakers Inc. v. St Jude Medical Inc.* 72 USQP2d 1333, 1336 (Fed. Cir 2004) that "Prior knowledge in the field of the invention must be supported by tangible teachings of reference materials, and the suggestion to combine references must not be derived by hindsight from knowledge of the invention itself. See also *Gambro Lundia AB v. Baxter Healthcare Corp.*, 110 F.3d 1573, 1578-79 [42 USPQ2d 1378] (Fed. Cir. 1997) ("However, the record must provide a teaching, suggestion, or reason to substitute computer-controlled valves for the system of hoses in the prior art. The absence of such a suggestion to combine is dispositive in an obviousness determination.")"

ii. **The Examiner has failed to explain why a person of ordinary skill in the art reading FR '622 would look for Baugh.**

Baugh describes "a composition of matter for repelling animals that comprises a mixture of a metallic metal, a quantity of soil that has been extracted from the earth, a nutrient source, and water" (See Baugh, col. 2, lines 55-58). The Examiner's failure to explain why a person of ordinary skill in the art looking for an odorant to use in a gaseous composition (FR '622) would look for a patent (Baugh) directed to "a composition of matter for repelling animals that comprises a mixture of a metallic metal, a quantity of soil that has been extracted from the earth, a nutrient source, and water" is further evidence that the Examiner has relied on improper hindsight reasoning and Applicants' own application in order to combine Baugh with FR '622

d. The deficiencies of FR '622 in failing to teach or suggest selenium compounds cannot be properly remedied by Baugh or any other reference.

For the reasons discussed above, the deficiencies of FR '622 in failing to teach or suggest selenium compounds cannot be properly remedied by Baugh or any other reference. Therefore, the combination of Baugh with FR '622 is *prima facie* improper, and the rejection of claims 2-4, 7-11, and 47-53 over the combination of Baugh with FR '622 is *prima facie* improper and should be withdrawn.

2. The rejection of claims 2, 4, 7-11, 50, 51 and 53 over the combination of Baugh with FR '622 is *prima facie* improper because the Office Action has provided no proper motivation for combining Baugh with FR '622.

a. The Examiner' alleged motivation for combining Baugh with FR '622 is based on a mischaracterization of FR '622.

The rejection of claims 2, 4, 7-11, 50, 51 and 53 over the combination of Baugh with FR '622 is *prima facie* improper, because the Examiner provides no appropriate basis for combining Baugh with FR '622. See quotation from (MPEP) § 706.02(j) in Section A(2)(a) above.

The Office Action attempts to justify combining Baugh with FR '622 based on the following conclusory statement which relies not on the references of Baugh or FR '622, but instead on Applicants' own disclosure:

It would be obvious from Baugh to employ dimethyl selenide selenol as the odorous product in the composition of FR '622, since FR '622 suggests in the Abstract that any odorous gaseous product may be employed . . . (See Office Action, pp. 3).

However, the above assertion by the Examiner mischaracterizes what FR '622 actually teaches and/or suggests. Contrary to above assertion by the Examiner, FR '622 does not and cannot suggest that compounds other than sulfur, much less selenium compounds, may

be used as odorants with hydrogen. FR '622 only describes the use of mercaptan, thiophane and TBM (tertiary butyl mercaptan) odorants (see FR '622, Abstract), all of which are *sulfur compounds*. The Examiner has also failed to identify a single non-sulfur compound that is taught or suggested by FR '622. Therefore, the Examiner has failed to properly identify a motivation in FR '622 for combining Baugh with FR '622. As stated by the Federal Circuit in *Sibia Neurosciences Inc. v. Cadus Pharmaceutical Corp.*, 55 USPQ2d 1927, 1931 (Fed. Cir. 2000), “[d]etermining whether there is a suggestion or motivation to modify a prior art reference is one aspect of determining the scope and content of the prior art, a fact question subsidiary to the ultimate conclusion of obviousness.” (citing *Tec Air, Inc. v. Denso Mfg.*, 52 USPQ2d 1296, 1297-98 (Fed. Cir. 1999) (stating that the factual underpinnings of obviousness include whether a reference provides a motivation to combine its teachings with another)). Furthermore, as noted by the Federal Circuit in *In re Lee*, 61 USPQ2d 1430, 1433 (Fed. Cir. 2002), specific reasons must be shown in the art suggesting a combination of references. (See also *In re Kotzab*, 217 F.3d 1365, 1371, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000) (“[P]articular findings must be made as to the reason the skilled artisan, with no knowledge of the claimed invention, would have selected these components for combination in the manner claimed.”); *In re Rouffet*, 149 F.3d 1350, 1359, 47 USPQ2d 1453, 1459 (Fed. Cir. 1998) (“[E]ven when the level of skill in the art is high, the Board must identify specifically the principle, known to one of ordinary skill, that suggests the claimed combination.”)).

**b. The fact the Examiner has admitted that selenium compounds are patentably distinct from sulfur compounds is inconsistent with the Examiner's arguments for combining Baugh with FR '622.**

In addition to FR '622 failing to suggest the use of non-sulfur compounds, as stated by the Examiner at page 4 of the Restriction Requirement, selenium compounds are a “patentably distinct species” from sulfur compounds. Therefore, since, as the Examiner has previously admitted, selenium compounds are *patentably distinct from sulfur compounds*, it would *not be obvious* for a person of ordinary skill in the art to employ a selenium compound, including the dimethyl selenide compound of Baugh, in place of the sulfur compounds of FR '622.

**3. The rejection of claims 2, 4, 7-11, 50, 51 and 53 over the combination of Baugh with FR '622 is *prima facie* improper and should be withdrawn.**

For the reasons discussed above, the rejection of claims 2, 4, 7-11, 50, 51 and 53 over the combination of Baugh with FR '622 is improper and should be withdrawn.

**4. New claim 54-61 are patentable over the combination of Baugh with FR '622.**

Claims 54-61 are dependent, either directly or indirectly, from claim 2, and, accordingly, includes all of the patentable features of claim 2 as well as other patentable features. Therefore, claims 54-61 are patentable over the combination of Baugh with FR '622 for at least the reasons that claim 2 is patentable over the combination of Baugh with FR '622.

**E Claims 2-4, 7-11 and 47-53 have been rejected based on facts within the personal knowledge of the Examiner**

In addition, with respect to claims 2-4, 7-11 and 47-53 have been rejected on the basis of facts within the personal knowledge of the Examiner. The Examiner has based all of his rejections of the claims on the following allegation that is unsupported by any factual evidence provided by the Examiner:

... FR '622 suggests in the Abstract that any odorous product may be added (See Office Action, p. 2, paragraphs 3 and 4, the paragraph bridging p.2 and p. 3, and p. 3, first full paragraph).

The Examiner alleges that:

In this case there are no facts based on the examiner's personal knowledge which are used as a basis for the rejection (See Office Action, p. 3)

However, the above allegation by the Examiner is simply untrue. As discussed above and repeatedly pointed out by Applicants during the prosecution of the present application, the

Examiner continues to allege that FR '622 teaches non-sulfur odorant compounds while simultaneously failing to tell Applicants what non-sulfur odorant compounds are taught by FR '622. Every compound described in the Abstract of FR '622 is a sulfur compound.

The Examiner has also provided no factual support in FR '622 for the following allegation by the Examiner that has also been used as a basis for rejecting claims 2-4, 7-11 and 47-53:

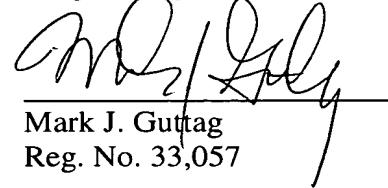
Applicants' argument, that the Examiner has "admitted" that selenium compound are patentably distinct from sulfur compounds is not convincing, since the teachings of FR '622 are not limited to the use of sulfur compounds (see Office Action, p. 3)

Because the Examiner has provided Applicants with no factual support for the Examiner's allegations that FR '622 teaches and suggests sulfur compounds, Applicants can only presume that the Examiner knows of factual evidence in FR '622 that the Examiner, to date, has not provided to the Applicants. Accordingly, under 37 C.F.R. § 1.104(d)(2) the Applicants hereby request that the Examiner provide an affidavit that provides factual evidence supporting the Examiner allegations used as a basis for rejecting claims 2-4, 7-11 and 47-53, or, in the alternative, to withdraw the rejections of claims 2-4, 7-11 and 47-53.

If the Examiner has any questions or concerns regarding the present response, the Examiner is invited to contact Mark J. Guttag at 703-591-2664, Ext. 2006.

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance, and favorable action is respectfully solicited.

Respectfully submitted,

  
\_\_\_\_\_  
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